

CLAIMS:

1. A surface illumination device comprising a light guide plate that has a reflecting prism face and a light exit face opposite to the prism face for propagating incident light inside the plate and reflecting the light at the reflecting prism face to output the light from the light exit face, which further comprises:
- a polarizing plate provided on the light exit face; and
  - an anti-reflection film provided on the polarizing plate.
2. A surface illumination device as defined in Claim 1, CHARACTERIZED in that the reflecting prism face extends so that a direction of electric vector's vibration of an s-polarized light component of a reflecting light ray caused by an incident light ray in a predetermined propagation direction is in parallel with a polarization axis of the polarizing plate.
3. A surface illumination device comprising a light guide plate that has a reflecting prism face and a light exit face opposite to the prism face for propagating incident light inside the plate and reflecting the light at the reflecting prism face to output the light from the light exit face,
- which further comprises a polarizing plate provided opposite to the light exit face,
  - the reflecting prism face extending so that a direction of electric vector's vibration of an s-polarized light component of a reflecting light ray caused by an incident light ray in a predetermined propagation direction is in parallel with a polarization axis of the polarizing plate.
4. A surface illumination device as defined in Claim 2 or 3, CHARACTERIZED in that the illumination device further comprises:
- a side light section comprising a light emission section and a light guide body section for propagating the light emitted by the light emission section to widely introduce it into an end face of the light guide plate; and
  - un-divergence means for reducing a degree of divergence of light incident on an end face of the light guide plate,
  - the un-divergence means including a prism body section arranged to cause

the light to be incident on the light guide plate in such a manner that the incident light ray in the predetermined propagation direction comes into the reflecting prism face.

5 5. A surface illumination device comprising: a light guide plate that has a reflecting prism face and a light exit face opposite to the prism face for propagating incident light inside the plate and reflecting the light at the reflecting prism face to output the light from the light exit face; and a side light section for introducing the light into an end face of the light guide plate, CHARACTERIZED in that:

10 the side light section comprises a light emission section and a polarizing section for polarizing the light emitted by the light emission section, and is arranged so that the polarized light component is introduced into an end face of the light guide plate; and

15 the polarizing section has a polarizing axis parallel with a direction of electric vector's vibration of an s-polarized light component of a reflecting light ray caused in the reflecting prism face by an incident light ray in a predetermined propagation direction.

20 6. A surface illumination device as defined in Claim 5, CHARACTERIZED in that:

the side light section comprises a light guide body section for propagating the light emitted by the light emission section to widely introduce it into an end face of the light guide plate;

25 the surface illumination device further comprises un-divergence means for causing a degree of divergence of the light incident on an end face of the light guide plate to be reduced; and

the un-divergence means comprise a prism body section arranged to make light to enter the light guide plate in such a manner that the incident light ray in the predetermined propagation direction is introduced into the reflecting prism face.

30 7. A surface illumination device as defined in any one of Claims 2-6, CHARACTERIZED in that: the predetermined propagation direction is a propagation direction in which the incident light ray can make a plane of incidence that is perpendicular to the reflecting prism face and the light exit face.

8. A surface illumination device as defined in any one of Claims 2-6,  
CHARACTERIZED in that a plurality of swath-shaped faces are used for the  
reflective prism face, and the predetermined propagation direction is a direction  
5 along a plane perpendicular to a longitudinal direction of the swath-shaped face.

9. A surface illumination device as defined in Claim 4 or 6,  
CHARACTERIZED in that the prism body section is formed integral with the light  
guide plate.

10. A surface illumination device as defined in Claim 4 or 6,  
CHARACTERIZED in that the prism body section is formed on the polarizing  
section.

11. A surface illumination device as defined in Claim 4 or 6,  
CHARACTERIZED in that the prism body section is formed integral with the light  
guide body section.

12. A display device using a surface illumination device as defined in any one  
of Claims 1-11, CHARACTERIZED in that the surface illumination device is  
20 arranged in such a manner that the light exit face is faced to a display face of the  
display device.

13. A display device as defined in Claim 12, CHARACTERIZED in that the  
25 display device has a second polarizing plate provided faced to the light exit face, the  
reflecting prism face extending so that a direction of electric vector vibration of an  
s-polarized light component of a reflecting light ray caused by an incident light ray  
in the predetermined propagation direction is also in parallel with a polarization axis  
of the second polarizing plate.

14. A liquid crystal display device using a surface illumination device as  
defined in Claim 3, CHARACTERIZED in that the display device comprises a  
liquid crystal cell for performing optical modulation in accordance with an image to  
be displayed, the polarizing plate being carried on the liquid crystal cell.

15. A surface illumination device comprising: a light guide plate that has a reflecting prism face and a light exit face opposite to the prism face for propagating incident light inside the plate and reflecting the light at the reflecting prism face to  
5 output the light from the light exit face; and a side light section for making light to be incident on an end face of the light guide plate, wherein

the side light section comprises a light emission section, a light guide body section for propagating the light emitted by the light emission section to widely introduce it into an end face of the light guide plate, and un-divergence means for  
10 causing a degree of divergence of the light incident on an end face of the light guide plate to be reduced,

the un-divergence means comprises a prism body section formed integral with the light guide body section.

15 16. A surface illumination device as defined in Claim 15, CHARACTERIZED in that the light guide body section has a light exit face faced toward an end face of the light guide plate and a light reflective face opposed to the exit face, the prism body section being formed by projections and depressions of the light exit face.